

**Renewal Technical Support Document
Aqua Fria Generating Station
Permit Number V95-010
Permit Renewal
Issue Date: xxxxxxxx**

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1. APPLICANT / PROJECT LOCATION:

Salt River Project Agricultural Improvement and Power District (SRP)
P. O. Box 52025 PAB 352
Phoenix, AZ 85072-2025

The Salt River Project (SRP) Agua Fria Generating Station is located at 7302 West Northern Avenue, Glendale, AZ 85303. The site coordinates are: 33°33'25" latitude and 112°13'03" longitude.

The source is located in an area rated serious nonattainment for PM₁₀ and moderate nonattainment for 8-hour ozone.

2. PROJECT DESCRIPTION:

This is a support document intended to provide additional information associated with the renewal of the permit. However, this Technical Support Document (TSD) is not part of the permit and is not a legally enforceable document.

Agua Fria consists of six electric generating units. Units 1, 2, and 3 are steam electric boilers. Units 1 and 2 commenced operation in the late 1950's, and are each rated at approximately 113 MW. Unit 3 began operation in 1961 and is rated at approximately 181 MW. Each of these units has a mechanical induced draft cooling tower. Units 4, 5, and 6 are simple cycle combustion turbines. All three units commenced operation in the mid 1970's. Unit 4, 5 and 6 are rated at approximately 69 MW. All six of the units use primarily natural gas as fuel. Diesel fuel is maintained as an emergency fuel.

There are no substantive changes to permit requirements for this renewal. Changes to the permit are limited mainly to clarifying existing requirements, adding new language from federal rules and eliminating some outdated ones.

3. DESCRIPTION OF REGULATED ACTIVITIES:

The sole purpose of the SRP Agua Fria Generating Station is to produce electrical power for Salt River Project customers. Most of the equipment and processes are regulated in some manner (the exception is the insignificant activities).

Equipment Name/Type	Vendor or Manufacturer	Model	Serial Number	Date Installed	Quantity	Capacity
Electric Generating Units:						
Unit 1 Boiler	Riley Stoker	3182	n/a	1958	1	1,253 MMBtu/hr
Unit 2 Boiler	Riley Stoker	3182	n/a	1957	1	1,253 MMBtu/hr
Unit 3 Boiler	Riley Stoker	3373	n/a	1961	1	1,956 MMBtu/hr
Unit 4 Gas Turbine	Westinghouse	W-501B2	n/a	1975	1	1,129 MMBtu/hr
Unit 5 Gas Turbine	Westinghouse	W-501B1	n/a	1974	1	1,118 MMBtu/hr
Unit 6 Gas Turbine	Westinghouse	W-501B1	n/a	1974	1	1,118 MMBtu/hr
Cooling Towers:						
Cooling Tower 1	Marley	n/a	n/a	1952	1	82,000 gpm
Cooling Tower 2	Marley	n/a	n/a	1954	1	82,000 gpm
Cooling Tower 3	Marley	n/a	n/a	1961	1	76,250 gpm
Supporting Activities:						
Fire Pump	n/a	n/a	n/a	n/a	1	258 hp
Emergency Generator	n/a	n/a	n/a	n/a	1	355 hp
Gasoline Tank	n/a	n/a	n/a	n/a	1	500 gal
Parts Washers	n/a	n/a	n/a	n/a	misc.	n/a
Blast Building	n/a	n/a	n/a	n/a	1	19,500 acfm
Abrasive Blasting Cabinet (aka Bead Blaster)	Clemco	3636	n/a	2014	1	3' x 3' x 3'
Insignificant Activities:						
Diesel Tank #1	n/a	n/a	n/a	n/a	1	1,807,974 gal
Diesel Tank #2	n/a	n/a	n/a	n/a	1	2,861,964 gal
Diesel Tank #3	n/a	n/a	n/a	n/a	1	5,511,072 gal
Diesel Tank #3A	n/a	n/a	n/a	n/a	1	434,910 gal
Diesel Tank #3B	n/a	n/a	n/a	n/a	1	434,910 gal
Diesel Tank – Vehicles	n/a	n/a	n/a	n/a	1	550 gal
Diesel Tank – Fire Pump	n/a	n/a	n/a	n/a	1	275 gal
Diesel Tank – Emergency Generator	n/a	n/a	n/a	n/a	1	550 gal
Misc. chemical and petroleum storage tanks ≤ 250 gal	n/a	n/a	n/a	n/a	n/a	n/a
Misc. lube oil tanks ≤ 12,000 gal	n/a	n/a	n/a	n/a	n/a	n/a
Laboratory equipment	n/a	n/a	n/a	n/a	n/a	n/a
Acid storage	n/a	n/a	n/a	n/a	n/a	n/a
Welding exhaust	n/a	n/a	n/a	n/a	n/a	n/a
Hand held equipment	n/a	n/a	n/a	n/a	n/a	n/a
Small Paint Booth	Binks	n/a	n/a	n/a	1	19,500 acfm
n/a = not available or not applicable						

4. EMISSIONS:

A detailed list of Emissions from all units can be found in the Renewal Application. There are no specific emission limitations on any of the units, because they were installed before Maricopa County rules were promulgated and no authority to limit emissions is needed. Below are the reported emissions in 2014 for informative purposes:

Table 1: Agua Fria Title V Permit V95-010 Emissions 2014

Pollutant	Total Emissions (tons per year)	Regulatory Limits
VOC	2	None
NO _x	45	None
SO _x	0.1	None
PM ₁₀	7.9	None
CO	29	None

5. ALTERNATIVE OPERATING SCENARIOS:

There are no alternate operating scenarios.

6. PERMIT REVISIONS:

There are no revisions or modifications requested for the Agua Fria Generating Station permit renewal.

7. PERMIT HISTORY:

SRP was issued its initial Title V permit for Agua Fria on January 3, 2000 by the Maricopa County Environmental Services Department (MCESD). Table 3 shows the history of revisions to the permit since then.

Table 2: Agua Fria Title V Permit V95-010 History

Approval Date	Revision Number	Type	Reason for Revision
01/3/2000	V95-010-0.0.0.0	Initial Issuance	Initial issuance.
12/27/2010	V95-010-1.0.0.0	Renewal	Renewal
11/12/2015	V95010-1.0.1.0	Minor Mod	Minor modification application
TBD	V95010-2.0.0.0	Renewal	Renewal

8. SUMMARY OF CHANGES TO PERMIT CONDITIONS UPON RENEWAL:

- A. Deleted Condition 18.C, which was a reference to insignificant activity for internal combustion engines. This is not an applicable requirement.
- B. Condition 19. D 1. Added a sentence which prohibits peak shaving.
- C. Condition 19.D 4 added an entire section for 40 CFR 63 subpart ZZZZ operational limitations.
- D. Condition 20.B 4 and 5 added a phrase at the end of the requirement to conduct method 22 readings to only when using fuel oil. Natural gas burning does not need additional opacity reading monitoring.
- E. Condition 20 D: added 40 CFR 63 subpart ZZZZ record keeping requirements.
- F. Updated the equipment list

9. POTENTIALLY APPLICABLE REQUIREMENTS:

No new promulgated rules or regulations being written that would have an effect on this facility.

10. COMPLIANCE ASSURANCE MONITORING:

Agua Fria monitors emissions of NO_x and CO₂ from Units 1, 2, and 3 in accordance with federal Acid Rain Program requirements (40 CFR Parts 72-76)

Individual Responsibilities:

PLANT MANAGER – The plant manager allocates resources to ensure plant compliance with Title V regulations for testing of the continuous emissions monitoring system (CEMS) and its operation, preventative maintenance and daily QC activities. He/she also allocates personnel resources as necessary to support sufficient training in CEMS operation and maintenance.

CORPORATE ENVIRONMENTAL – Corporate environmental staff are responsible for reviewing regulations and assisting plant personnel in implementing new requirements, maintaining corporate files and records, and maintaining CEMS data for corporate information and use.

PLANT STAFF – The plant staff are responsible for maintaining and implementing O&M Plans and QA Plans.

Description of CEMS:

Agua Fria uses dilution extractive CEMS to monitor NO_x and CO₂ on Units 1, 2, and 3. Other pollutants are monitored using emission factors and fuel use data. Fuel usage meters are installed on these units.

Emissions from Units 4, 5, and 6 are monitored using emission factors and fuel use data. Fuel usage meters are also installed on these units.

11. CONCLUSION AND PROPOSED ACTION:

Based on the information supplied by SRP, and on the analyses conducted by the MCAQD, the MCAQD has concluded that the requested permit renewal is consistent with Federal, State, and County regulations.

The MCAQD proposes to issue the Permit Renewal, V95010 – 2.0.0.0, subject to the proposed permit conditions.